***Teacher Key – In Notebooks***

CW#120: Parallelograms

Geometry

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| **CRS** | PPF701 Classify quadrilaterals |
| **Objective** | 12.1 Classify quadrilaterals  12.2 Use properties of parallelograms to find missing side lengths and angles  12.3 Find area of parallelograms |

*Have students complete reflection questions either independently or as a group in their notebooks:*

|  |  |
| --- | --- |
| **What do you ALREADY know?!** | |
| 1) What is a quadrilateral?  2) What are TWO quadrilaterals that we have already learned a lot about?  ~~3) Make a T-Chart. In one column, list names of special quadrilaterals that you already know. In the right-hand column, draw a picture of each special quadrilateral.~~ | |
| **Notes - Quadrilaterals** *(write in notebook)* | |
| * Quadrilateral just means "four sides"  (*quad* means four, *lateral* means side). * **Any four-sided shape is a Quadrilateral.** * **Sides have to be straight lines.** * **Sum of angles of a quadrilateral is 360° (because quadrilateral can be divided into 2 triangles)** | Description: Quadrilaterals  *(not one on right obvi)* |
| **Notes – Parallelogram** *(write in notebook)* | |
| Description: Parallelogram | * **Definition: both sets of opposite sides are *parallel*** * **Opposite sides congruent** * **Opposite angles are congruent (** * **Consecutive angles are supplementary (a+b=180°)** |

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Per: \_\_\_\_\_\_

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| **Find Missing Angles** | |
| **Given**: ABCD is a parallelogram. Label everything you know about *□*ABCD on the diagram. ***(Continue to label everything you know throughout this worksheet.)***  http://upload.wikimedia.org/wikipedia/commons/thumb/b/ba/Parallelogram_simple.svg/1280px-Parallelogram_simple.svg.png | **EXAMPLE 1:** ABCD is a parallelogram. Label the measure of each angle in the parallelogram.  Description: [image] |
| **EXAMPLE 2:**  Solve for x. | **EXAMPLE 3:** |
| 1. ABCD is a parallelogram. Label the measure of each angle in the parallelogram. |  |
|  |  |
| **Find Missing Sides** | |
| **EXAMPLE 4:** |  |
| **SYNTHESIZE!** | |
| 1. Error analysis: In *□ ABCD*, A student says that . Explain why this is incorrect. | 1. In *□ QRST, , , and .* Why is this not a quadrilateral? (2 reasons) |
| 1. Find the value of each variable in the parallelogram. | 1. Find the value of each variable in the parallelogram. |
| 1. Given parallelogram HIJK, find its perimeter. The perimeter should contain NO variables. Use the properties of parallelograms to help you solve for the variables first!   Description: Sides of Parallelogram Illlustration | |
| 1. The measure of one interior angle of a parallelogram is 50 degrees more than 4 times the measure of another angle. Find the measure of each angle. | 1. The sides of *□MNPQ* are represented by these expressions: . Sketch this and find its perimeter. |
| 1. Answer the following WITHOUT looking at your notes: a) What do you know about sides of a parallelogram? B) What do you know about the angles of a parallelogram? **Diagram it!** | |